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TRANSMITTAL FORM

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Total Number of Pages in This Submission 24

Application Number	10/656,392
Filing Date	September 5, 2003
First Named Inventor	Trebor Heminway
Art Unit	1725
Examiner Name	Jonathan J. Johnson
Attorney Docket No.	MKPA-107US

ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/Declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): PTO-2038
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Remarks:

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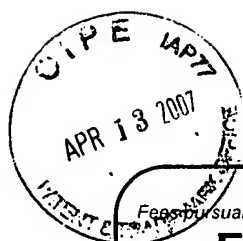
Firm Name	RatnerPrestia		
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Printed Name	Kenneth M. Nigon		
Date	April 11, 2007	Registration No.	31,549

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Signature			
Typed or Printed Name	Patricia C. Boccia	Date	April 11, 2007

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Office, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, ALEXANDRIA, VA 22313-1450.

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PTO/SB/17 (12-04v2) (AW 1/2005)

Approved for use through 7/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Effective on 12/08/04.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL For FY 2006

☐ Applicant claims small entity status. See 37 CFR 1.27

Complete if Known

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Filing Date	September 5, 2003
First Named Inventor	Trebor Heminway
Examiner Name	Jonathan J. Johnson
Art Unit	1725
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TOTAL AMOUNT OF PAYMENT (\$) 500.00

METHOD OF PAYMENT (check all that apply)

☐ Check ☒ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 18-0350 Deposit Account Name: RatnerPrestia

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee
☒ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES

Fee Description

Each claim over 20 (including Reissues)

Each independent claim over 3 (including Reissues)

Multiple dependent claims

Small Entity	
Fee (\$)	Fee (\$)
50	25
200	100
360	180

Total Claims	- 20 or HP =	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims	Fee (\$)	Fee Paid (\$)
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HP = highest number of total claims paid for, if greater than 20

Indep. Claims	- 3 or HP =	Extra Claims	Fee (\$)	Fee Paid (\$)
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HP = highest number of independent claims paid for, if greater than 3

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
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_____ - 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Appeal Brief Fee

Fees Paid (\$)

500

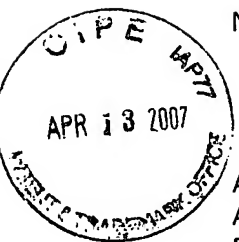
SUBMITTED BY

Complete (if applicable)

Signature		Registration No. Attorney/Agent)	31,549	Telephone	610-407-0700
Name (Print/Type)	Kenneth N. Nigon	Date	April 11, 2007		

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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MKPA-107US

PATENT

/IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appln. No: 10/656,392
Applicant: Trebor Heminway et al.
Filed: 09/05/2003
Title: SOLDER PREFORM FOR LOW HEAT STRESS LASER SOLDER
ATTACHMENT
TC/A.U.: 1725
Examiner: Jonathan J. Johnson
Confirmation No.: 9588
Notice of Appeal Filed: 02/13/2007
Docket No.: MKPA-107US

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

S I R :

Appellants hereby request consideration and reversal of the Rejection dated December 21, 2006, of claims 1-7.

This Brief is presented in the format required by 37 C.F.R. § 41.37, in order to facilitate review by the Board. In compliance with 37 C.F.R. § 41.37(a)(1), this Brief is being filed within the time allowed for response to the action from which the Appeal was taken or within two months from the date of the Notice of Appeal, whichever is later.

The fees for filing a Brief in support of an Appeal under 37 C.F.R. § 41.20(b)(2), together with any extension fee required in connection with the filing of this Brief, are provided herewith.

I. REAL PARTY IN INTEREST

The real Party In Interest in this matter is Matsushita Electric Industrial Col. Ltd. by virtue of an assignment recorded on 9/05/2003, at Reel/Frame 014482/0671.

II. RELATED APPEALS AND INTERFERENCES

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There are no related appeals or interferences known to Appellant, Appellant's legal representative, or Assignee which may be related to, be directly affected by, or have a bearing on the Board's decision in the pending Appeal.

III. STATUS OF CLAIMS

Claims 1-15 are pending in this application. Of the pending claims, claims 9-15 have been withdrawn. Claims 1-7 stand rejected. Claim 8 is objected to as dependent upon rejected base claim 1. Claims 1-7 are appealed. Of those claims currently under appeal, claim 1 is independent.

IV. STATUS OF AMENDMENTS

The present application is under a non-final rejection after a Request for Continuing Examination was submitted. Appellant elected not to submit a Response. Instead, Appellant filed a Notice of Appeal on February 13, 2007. The present application has been subject to restriction and has been rejected five times. Prior to the present rejection, Appellant filed a Request for Continuing Examination and an Amendment during prosecution. The Amendment was entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claims 1-7 are appealed. The claimed invention is directed to a novel solder preform. As background, a solder preform is configured to be placed on an optical fiber for solder attachment of the optical fiber to a fiber attach pad. Prior to attachment of the optical fiber, the optical fiber, with the solder preform, is aligned with an emitting device, such as a laser or a light emitting diode (LED). The weight of the solder preform may impede motion of the optical fiber, making it difficult to align the optical fiber. In addition, during soldering, alignment of the optical fiber may be altered due to capillary stresses from molten solder, resulting in a subsequent misalignment of the optical fiber after the attachment. In general terms, Appellant's claimed invention recites a solder preform having a body including a groove extending along a face of the body. The groove is larger than the optical fiber, a height of the groove being greater than its width, to allow alignment of the optical fiber within the groove in first and second directions. This provides the optical fiber with unimpeded alignment in vertical and horizontal directions. Because emissions of laser diodes and LED's are typically in a narrow area around a horizontal

plane, alignment of the optical fiber to an emitting device in the vertical direction is typically more critical than its alignment in the horizontal direction. Because the height of the groove is greater than its width, the solder preform also has the benefit of allowing for a greater flexibility in aligning the optical fiber in the vertical direction. Because the groove is larger than the optical fiber, the optical fiber may be aligned with little or no dragging of the solid solder preform and minimal capillary forces from the molten solder preform.

In accordance with 37 C.F.R. §41.37(c)(1)(v), a concise explanation of the subject matter defined in the independent claim 1 under appeal is set forth below. Citations to the application's support for the claimed subject matter are made by reference to numbered paragraph (§) of Appellant's specification (AS) as originally filed (e.g., AS § 0006) as well as corresponding figures (Figs.).

Claim 1

Independent claim 1 broadly recites a solder preform for attaching an optical fiber having a diameter to a fiber attach pad. AS § 0029; AS § 0031; AS § 0032; and Fig. 3D. The claimed solder preform comprises a body including solder at least on a bottom surface thereof. AS § 0029; and Figs. 2A-2B. The body has a groove extending along a first face from a first end to a second end. AS § 0029-0031; and Figs. 2A-3D. The groove is larger in size than the optical fiber to allow alignment of the optical fiber within the groove in first and second directions when the groove of the solder preform is placed over the optical fiber. AS § 0031-0032; and Fig. 3D. The groove has a height dimension, relative to the height of the body and a width dimension, relative to the width of the body. AS § 0031; and Figs. 3A-3D. A ratio of the height dimension to the width dimension is about 1.1:1 to about 1.9:1. AS § 0032; and Fig. 3D. The body has a length defined as a distance between the first and second ends, a height defined as a distance between the bottom and top surfaces, and a width defined as a distance between third and fourth ends. AS § 0030; and Figs. 3A-3D.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-6 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,984,866 to Boisgontier et al. (Boisgontier).

Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Boisgontier and further in view of U.S. Patent No. 4,702,547 to Enochs.

Claim 8 stands objected to as dependent upon rejected base claim 1.

VII. ARGUMENT

A. ARGUMENT SUMMARY

1. APPELLANT'S INVENTION AS RECITED IN CLAIMS 1-6 IS NOVEL OVER THE DISCLOSURE OF BOISGONTIER BECAUSE BOISGONTIER DOES NOT DISCLOSE A GROOVE "HAVING A HEIGHT DIMENSION RELATIVE TO THE HEIGHT OF THE BODY AND A WIDTH DIMENSION RELATIVE TO THE WIDTH OF THE BODY, WHEREIN A RATIO OF SAID HEIGHT DIMENSION TO SAID WIDTH DIMENSION IS ABOUT 1.1:1 TO ABOUT 1.9:1."

The issue on appeal with respect to the rejection of claims 1-6 is whether the disclosure of Boisgontier anticipates every limitation of Appellant's independent claim

1. Claim 1 includes limitations that recite:

...the body having a length defined as a distance between the first end and the second end, a height defined as a distance between the bottom surface and a top surface opposite the bottom surface, and a width defined as a distance between a third end and a fourth end opposite the third end...

...the groove having a height dimension relative to the height of the body and width dimension relative to the width of the body, wherein a ratio of said height dimension to said width dimension is about 1.1:1 to about 1.9:1...

These limitations were added to claim 1 by Appellant: (1) in response to the rejection under 35 U.S.C. §112, first paragraph, in the fourth, final Office Action of August 30, 2006 (providing an upper limit of about 1.9:1) and (2) in response to a telephone interview of October 31, 2006 (the height and width of groove being defined with respect to solder preform).

In order to better understand Appellant's definition of groove "height" and "width," Appellant includes Fig. 3C (referred to herein as Appellant's Figure), shown below, from the subject disclosure. As clearly shown in Appellant's Figure, Appellant has explicitly defined the groove height (GH) and groove width (GW). Appellant's

Figure also explicitly shows the relationship between the groove 212 dimensions (GH and GW) with respect to the solder preform body 201 dimensions (i.e. solder preform height (H) and width (W)). The subject specification, also provide discussion of Appellant's GH and GW. AS ¶ 0032.

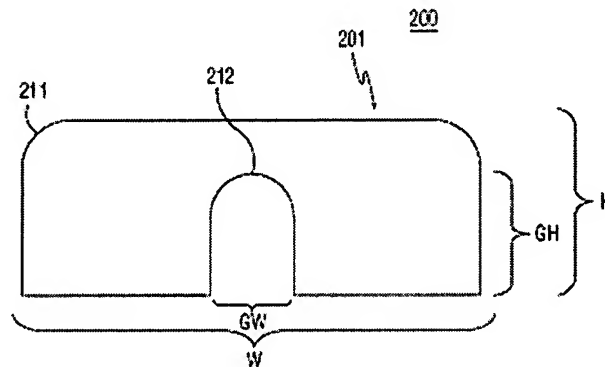
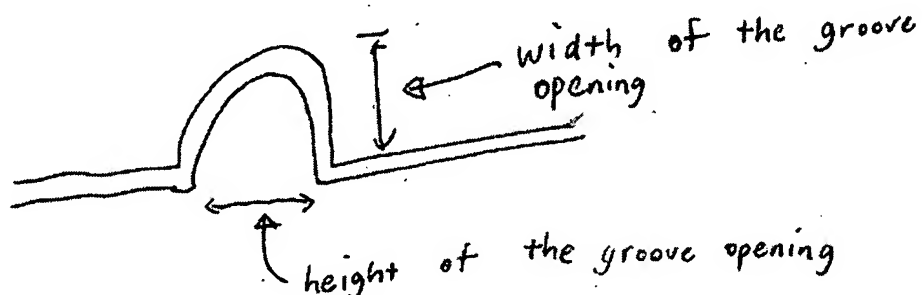


FIG. 3C

In the fourth, final Office Action of August 30, 2006, the Examiner provided the following response:

"Applicant argues that **Boisgontier teaches a height less than the width. While this may be so, the examiner uses a different interpretation of the height and width** of the arch. In the instant case, the examiner interprets height to be the distance from one end to the other end of the arch and the width to be the top end to the open end of the arch." (Emphasis Added), p. 4

The Examiner also included the following figure (referred to herein as Examiner's Figure) on p. 4 of the Office Action, shown below, to illustrate the Examiner's interpretation of the terms height and width. As shown in Examiner's Figure, the Examiner's interpretation of height and width are contrary to the explicit definition in Appellant's Figure, above.



The Appellant's representative conducted a telephone interview with the Examiner on October 31, 2006 to discuss the Examiner's remarks in the fourth, final Office Action of August 30, 2006. In the telephone interview, the Examiner acknowledged that the groove height and the groove width must be interpreted as defined by the subject disclosure. The Examiner, however, required that the groove height and the groove width be defined with respect to the dimensions of the solder preform. Appellant disagreed with the requirement to amend the claim to define height and width in terms of the solder preform, but, in order to speed prosecution of the application, amended the claim as required by the Examiner.

In the subsequent fifth, non-final Office Action of December 21, 2006, the Examiner remarked, on p. 4-5, that "limitations for the specification are not read into the claims" and proceeded to use a dictionary definition to justify the Examiner's interpretation of a height and width of the groove, as shown in Examiner's Figure, above. In addition, the Examiner dismissed the explicit definition of height and width in Appellant's Figure because the "examiner, however, can find no statement in the specification where applicant uses an explicit or special definition of the terms."

These statements illustrate the Examiner's failure to properly interpret the terms "height" and "width" according to a broadest reasonable interpretation consistent with the definition in the subject disclosure. If the Examiner interprets these terms (as in Examiner's Figure) in such an inconsistent fashion to the plain meaning of these terms as explicitly defined in Appellant's Figure of the subject disclosure, then the Examiner is in error. If the Examiner ignores the definition of height and width as explicitly disclosed in Appellant's Figure and, instead, asserts that there is no statement in the specification providing a definition of the terms, then the Examiner is in error. In addition, if the Examiner applies an extrinsic reference source, i.e. a dictionary definition, to define these terms in a manner inconsistent with the subject disclosure, then the Examiner is in error.

During patent examination, the Patent Office is entitled to construe pending claims under their "broadest reasonable interpretation consistent with the specification." *Phillips v. AWH Corp.*, 415 F.3d at 1314, 75 U.S.P.Q.2d at 1327. The Patent Office has recognized in policy that the interpretation of a claim term is constrained by the definition in the subject disclosure, including the figures. See

MPEP §2111.01 (III) citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 U.S.P.Q.2d 1321 (Fed. Cir. 2005) and MPEP §2111.01(IV) citing *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 U.S.P.Q.2d 1065, 1069 (Fed. Cir. 1999). In applying this inconsistent interpretation of the terms "height" and "width", the Examiner does not properly interpret these claim limitations. If the proper interpretations of "height" and "width" are used (i.e. according to the definition in the subject disclosure), Boisgontier does not include all of the limitations of claim 1 (acknowledged by the Examiner on p. 4 of the fourth, final Office Action of August 30, 2006) and applying an anticipation rejection to the remaining limitations is improper. See *Verdegaal Bros. v. Union Oil. Co. of California*, 814 F.2d, 2 U.S.P.Q.2d 1051 (Fed. Cir. 1987) ("A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference"); MPEP §2131.

2. APPELLANT'S INVENTION AS RECITED IN CLAIM 7 IS PATENTABLE OVER THE DISCLOSURES OF BOISGONTIER AND ENOCHS BECAUSE NEITHER BOISGONTIER, ENOCHS, NOR THEIR COMBINATION DISCLOSE A GROOVE "HAVING A HEIGHT DIMENSION... A WIDTH DIMENSION...A RATIO OF SAID HEIGHT DIMENSION TO SAID WIDTH DIMENSION IS ABOUT 1.1:1 TO ABOUT 1.9:1."

The issue on appeal with respect to the rejection of dependent claim 7 is whether the disclosures of Boisgontier and Enochs include every limitation of Appellants independent claim 1. As discussed above, claim 1 includes the limitation that recites:

...the groove having a height dimension relative to the height of the body and width dimension relative to the width of the body, wherein a ratio of said height dimension to said width dimension is about 1.1:1 to about 1.9:1...

Appellant's invention as claimed in independent claim 1 recites a ratio of a height dimension to a width dimension of about 1.1:1 to about 1.9:1 that is not disclosed in Boisgontier or Enochs, either alone or in combination. Enochs does not supply the deficiencies of Boisgontier and renders Boisgontier and Enochs inadequate as a basis for the Examiner's obviousness rejection of claim 7.

3. APPELLANT'S INVENTION AS RECITED IN CLAIM 8 IS ALLOWABLE AS RECITED BECAUSE THE BASE CLAIM IS ALLOWABLE.

The objection of claim 8 is not addressed because it is submitted that the base claim is allowable for the reasons set forth herein.

B. ISSUE

Claims 1-6 stand rejected under 35 U.S.C. §102(b) as anticipated by the disclosure of Boisgontier. Claim 7 stands rejected under 35 U.S.C. §103(a) as unpatentable over the disclosures of Boisgontier and Enochs. There are no other rejections and no other applied references. The issues on appeal are 1) whether the disclosure of Boisgontier anticipates Appellant's claimed invention and 2) whether the combination of Boisgontier and Enochs renders Appellant's invention obvious.

C. LEGAL STANDARD

Anticipation under 35 U.S.C. § 102(b)

A person shall be entitled to a patent unless-

...

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States, 35 U.S.C. §102 (2006)

To anticipate a claim, the reference must teach every element of the claim. MPEP §2131 citing *Verdgaal Bros. v. Union Oil Co. of California*, 814, F.2d628, 2 U.S.P.Q.2d 1051 (Fed. Cir. 1987). Appellant challenges the Office Action's rejections based on Boisgontier because Boisgontier fails to disclose every limitation of claims 1-6. That is, each of the Appellant's pending claims 1-6 recites at least one feature that is not taught by Boisgontier. Therefore, the Examiner's rejection of Appellant's pending claims 1-6 under 35 U.S.C. §102(b) is in error.

Obviousness under 35 U.S.C. §103(a)

Conditions for patentability; non-obvious subject matter.

(a)A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made. 35 U.S.C. §103 (2006)

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. MPEP §706.02(j) citing *in re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Appellant challenges the rejections in the Office Action based on Boisgontier and Enochs because Boisgontier fails to disclose every limitation of pending independent claim 1 and Enochs fails to make up for the deficiencies of Boisgontier. That is, the Appellant's pending dependent claim 7 includes all of the limitations of independent claim 1 from which it depends, and independent claim 1 recites at least one feature that is not taught by Boisgontier, Enochs or their combination. Therefore, the Examiner's rejection of Appellant's pending claim 7 under 35 U.S.C. §103(a) is in error.

D. APPELLANT'S INVENTION, AS RECITED IN CLAIMS 1-6 IS NOVEL OVER THE DISCLOSURE OF BOISGONTIER BECAUSE BOISGONTIER DOES NOT DISCLOSE A GROOVE IN WHICH "A RATIO OF SAID HEIGHT DIMENSION TO SAID WIDTH DIMENSION IS ABOUT 1.1:1 TO ABOUT 1.9:1."

It is settled law that the Examiner must construe the claims under prosecution to have their "broadest reasonable interpretation consistent with the specification." *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 U.S.P.Q.2d 1321 (Fed. Cir. 2005). This is

sound policy based upon recognition of an applicant's ability to amend the claims during prosecution and avoiding the issuance of claims that might be construed, post-issuance, more broadly than is warranted. *In re Prater*, 415, F.2d 1393, 162, U.S.P.Q. 541 (CCPA 1969). The courts and the PTO have recognized that there are limits to using extrinsic reference sources to determine an "ordinary and customary meaning of a term." See, e.g., *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 U.S.P.Q.2d 1321 (Fed. Cir. 2005); MPEP §2111.01 (III). As discussed in *Phillips v. AWH Corp.*:

"For example, a judge who encounters a claim term while reading a patent might consult a general purpose or specialized dictionary to begin to understand the meaning of the term, before reviewing the remainder of the patent to determine how the patentee has used the term. The sequence of steps used by the judge in consulting various sources is not important; what matters is for the court to attach the appropriate weight to be assigned to those sources in light of the statutes and policies that inform patent law. *Vitronics*, 90 F.3d at 1582."

Accordingly, a dictionary may be consulted but definitions in the intrinsic record have greater weight.

The Examiner's rejection of independent claim 1 based on the disclosure of Boisgontier extends beyond those limits.

In response to the third, non-final Office Action of April 21, 2006, the Appellant removed the limitation of the amount of clearance between the optical fiber and the groove and amended claim 1 to further recite that the groove has "a height dimension and width dimension, wherein a ratio of said height dimension to said width dimension is about 1.1:1 or greater" and explained that Fig. 8 of Boisgontier shows a height of a groove of a preformed bridge strip of solder (70) that is less than its width but does not disclose that or suggest that a height of the groove is greater than its width, such that the ratio of the height dimension to the width dimension is about 1.1:1 or greater.

In the fourth, final Office Action of August 30, 2006, the Examiner rejected this version of claim 1 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement and based on the disclosure of Boisgontier, and provided the following reasoning:

With respect to the 35 U.S.C. §112, first paragraph rejection:

"while applicant has support for the 'about 1.1:1' claim limitation, applicant does not have support for the expansive claim limitation of "'greater [than 1.1:1].' That is applicant only has support for an upper range of 1.9:1. Applicant has no support for greater than 1.9:1.", p. 2

With respect to the rejection based on the disclosure of Boisgontier:

"Applicant argues that **Boisgontier teaches a height less than the width. While this may be so, the examiner uses a different interpretation of the height and width** of the arch. In the instant case, the examiner interprets height to be the distance from one end to the other end of the arch and the width to be the top end to the open end of the arch." (Emphasis Added), p. 4

A telephone interview was conducted with the Examiner on October 31, 2006. During the course of the telephone interview, the Appellant's representative compared the interpretation of groove height and groove width as defined by the subject disclosure, in particular, Figs. 3A-3D and AS ¶ 0030-0032 with the alternative interpretation as asserted in the Office Action. Appellant's representative pointed out that an ordinary and customary meaning of height and width must be used and, furthermore, that the groove height/groove width must be interpreted as defined in the subject disclosure. During the course of the interview, the Examiner acknowledged that the groove height and the groove width are to be interpreted as defined in the subject disclosure. The Examiner, however, required that the groove height and the groove width be defined with respect to the dimensions of the solder preform.

In response, the Appellant amended claim 1 to further recite that

...the body having a length defined as a distance between the first end and the second end, a height defined as a distance between the bottom surface and a top surface opposite the bottom surface, and a width defined as a distance between a third end and a fourth end opposite the third end...

...the groove having a height dimension relative to the height of the body and width dimension relative to the width of the body, wherein a ratio of said height dimension to said width dimension is about 1.1:1 to about 1.9:1...

and explained that Boisgontier clearly shows that a height of the groove of the preformed bridge strip of solder (70) is less than its width, as acknowledged in the Examiner's remarks on p. 4 of the fourth, final Office Action of August 30, 2006. Appellant disagreed with the requirement to amend the claim to define height and width in terms of the solder preform, but amended the claim as required by the Examiner, in order to speed prosecution of the application. In addition, the Appellant described an advantage over the preformed bridge of solder disclosed in Boisgontier in that the subject invention allows greater flexibility in aligning the optical fiber in the typically more critical vertical direction.

In the fifth, non-final, Office Action of December 21, 2006, the Examiner rejected this version of claim 1 based on the disclosure of Boisgontier and provided the following reasoning:

"Although the claims are interpreted in light of the specification, **limitations from the specification are not read into the claims...**

...During patent examination, **the pending claims must be 'given the broadest reasonable interpretation.'**... In the instant case, **dictionary.com defines...**

Applicant next argues the use of an explicit definition. The examiner, however, **can find no statement in the specification** where applicant uses an explicit or special definition of the terms." (Emphasis Added),p. 4-5 of the Office Action

The non-final Office Action met Appellant's argument that the terms "height" and "width" should be interpreted in light of the specification with a citation to the Prater Test for "broadest reasonable interpretation" and an inconsistent interpretation of the terms according to a dictionary definition, i.e. an extrinsic reference source. The Examiner also asserted that no statement was provided in the specification to define these terms. The Examiner misinterpreted the Appellant's argument. Appellant was endeavoring to explain that the proper standard for a reasonable, plain meaning of the terms "height" and a "width" of the groove is that which is consistent with the definition in the subject disclosure, including the figures. The proper standard is a broadest reasonable interpretation consistent with the specification. In addition, if an extrinsic reference source is used to interpret the claim terms, the definition must be consistent in light of the subject disclosure. See MPEP §2111.01 citing *Phillips v. AWH Corp.*

Instead, the Examiner ignores the definition provided in the subject disclosure (explicitly defined in Appellant's Figure and described in AS ¶ 0032) and advances an inconsistent interpretation (as shown in Examiner's Figure) using a dictionary definition:

"...In the instant case, dictionary.com defines... **width as being the 'extent from side to side.'** In applying the Prater test by giving the claims its broadest reasonable interpretation, it is the examiner's position that the Boisgontier teaches a **width the distance between the bottom surface and the opening** of the solder preform, which would be the measurement from one side to another side.

With respect to the 'height' claim limitation, dictionary.com defines **height as the 'distance from the base of something to the top.'** In applying the Prater test by giving the claims its broadest reasonable interpretation, it is the examiner's position that the Boisgontier teaches a height as the overall height can be measured from the distance from the base of something to the top. The groove height would be the distance between the base (which **corresponds to applicant's groove side**) to the top (which **corresponds to applicant's opposite groove side**).\" (Emphasis Added), p. 4-5

It is well settled that a claim limitation must be given its broadest reasonable interpretation consistent with definition in the subject specification.

The Federal Circuit's en banc decision in *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005) expressly recognized that the USPTO employs the "broadest reasonable interpretation" standard:

The Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364[, 70 USPQ2d 1827] (Fed. Cir. 2004). Indeed, the rules of the PTO require that application claims must "conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description." 37 CFR 1.75(d)(1). (MPEP §2111)

Here, the Examiner has adopted an interpretation of the claim limitations (see Examiner's Figure) that the "width" of the groove is the distance between a bottom surface of the groove and an opening of the solder preform whereas a "height" of the groove is the distance from a groove side to an opposite groove side. The Examiner's

argument as to the interpretation of "height" and "width" proves too much. By the Examiner's reasoning, the explicit definition of the terms height and width in the subject disclosure (see AS ¶ 0032 and Appellant's Figure 3C) may be completely ignored and, instead, interpreted in a lexicographic vacuum with an explicit reference source.

Furthermore, by the Examiner's own admission, the dictionary definition of width is the "extent from side to side" and height is the "distance from the base of something to the top." The Examiner's subsequent interpretation of height (a distance from a groove side to an opposite groove side) and width (a distance between a bottom surface of the groove and an opening of the solder preform), shown in Examiner's Figure, is inconsistent with the Examiner's own dictionary definition.

Finally, the Examiner's interpretation of height and width is contrary to the definition of these terms disclosed in Boisgontier. At Col. 10, lines 45-54, Boisgontier describes a front wall (40c) "provided with a horizontal feedthrough tube (42) extending up a fraction of its height" (see Figs. 5 and 6). Based on the height as defined in Boisgontier, a skilled person would understand that a height of the groove in the bridge strip of solder (70) corresponds to a distance from the keying area (64) to the top of the bridge strip of solder (70) (see Fig. 8). Accordingly, the Examiner's interpretation of height and width is also inconsistent with the definition provided in Boisgontier.

Accordingly, by failing to properly define the terms height and width in light of the subject specification, the Examiner fails to properly interpret the claim limitations. If the proper definition of "height" and "width" were used, Boisgontier would not include all of the limitations of claim 1 (acknowledged by the Examiner on p. 4 of the fourth, final Office Action of August 30, 2006) and applying an anticipation rejection to the remaining limitations is improper. See *Verdegaal Bros. v. Union Oil. Co. of California*, 814 F.2d, 2 U.S.P.Q.2d 1051; MPEP §2131.

E. APPELLANT'S INVENTION, AS RECITED IN CLAIM 7 IS NOVEL OVER THE DISCLOSURE OF BOISGONTIER AND ENOCHS BECAUSE BOISGONTIER COMBINED WITH ENOCHS DO NOT DISCLOSE A GROOVE THAT "A RATIO OF SAID HEIGHT DIMENSION TO SAID WIDTH DIMENSION IS ABOUT 1.1:1 TO ABOUT 1.9:1."

The issue on appeal in claim 7 is whether the combination of Boisgontier and Enochs renders obvious Appellant's limitation reciting a groove has a ratio of a height dimension to a width dimension of about 1.1:1 to about 1.9:1.

Appellant's pending claim 7 depends from claim 1 and includes all of the features of claim 1 from which it depends and is patentable over Boisgontier for at least the same reasons as claim 1.

Enochs does not supply the deficiencies of Boisgontier because it does not disclose or suggest that a groove of a silicon retaining member has a ratio of a height dimension to a width dimension of about 1.1:1 to about 1.9:1, as required by claim 1. In contrast, Enochs discloses that an optical fiber is positioned within a groove of a silicon retaining member and that "for an optical fiber which is about 125 microns in diameter, it is preferred that the groove be approximately 125 microns wide and 125 microns deep" (Col., 3, lines 56-59). Enochs is silent on providing a height of the groove that is greater than its width. Because neither Boisgontier, Enochs nor their combination disclose or suggest all of the limitations of claim 1, Boisgontier and Enochs are inadequate as a basis for the Examiner's obviousness rejection of claim 7.

F. APPELLANT'S INVENTION AS RECITED IN CLAIM 8 IS ALLOWABLE AS RECITED BECAUSE THE BASE CLAIM IS ALLOWABLE.

The objection of claim 8 is not addressed because it is submitted that the base claim is allowable for the reasons set forth above.

CONCLUSION

Appellant has advanced two reasons demonstrating that the disclosure of Boisgontier is insufficient as a basis for an anticipation rejection of the pending claims and that the disclosure of Enochs combined with the disclosure of Boisgontier is insufficient as a basis for an obviousness rejection of the pending claim. Accordingly, Appellants respectfully request the Board's reversal of these rejections.

Respectfully submitted,


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April 11, 2007


Patricia C. Boccella

VIII. CLAIMS APPENDIX

1. A solder preform for attaching an optical fiber having a diameter to a fiber attach pad, the solder preform comprising a body including solder at least on a bottom surface thereof, the body having a groove extending along a first face from a first end to a second end, the groove being larger in size than the optical fiber to allow alignment of the optical fiber within the groove such that the solder preform is configured to permit alignment of the optical fiber in first and second directions when the groove of the solder preform is placed over the optical fiber,

the body having a length defined as a distance between the first end and the second end, a height defined as a distance between the bottom surface and a top surface opposite the bottom surface, and a width defined as a distance between a third end and a fourth end opposite the third end,

the groove having a height dimension relative to the height of the body and width dimension relative to the width of the body, wherein a ratio of said height dimension to said width dimension is about 1.1:1 to about 1.9:1.

2. A solder preform according to claim 1, wherein a height of the groove is larger than a diameter of the optical fiber, allowing a range of clearance above and below the optical fiber.

3. A solder preform according to claim 1, wherein a width of the groove is larger than a diameter of the optical fiber, allowing a range of clearance on at least a side of the optical fiber.

4. A solder preform according to claim 1, wherein the body is formed as a geometric solid with at least one substantially flat face.

5. A solder preform according to claim 4, wherein the geometric solid is selected from a group consisting of a rectangular box, a cubical box, a cylinder, a semi-cylinder, a semi-sphere, a pyramid, and a cone.

6. A solder preform according to claim 1, wherein the body is formed from a metallic material.

7. A solder preform according to claim 1, wherein the body is formed from a glass material.

8. A solder preform according to claim 1, wherein the body is formed into a substantially rectangular box having a height H of $0.38\text{mm} \pm 0.05\text{mm}$, a groove height GH in a range of 0.26mm to 0.29mm , a width W in a range of 0.5mm to 1.5mm , a groove width GW in a range of 0.15mm to 0.23mm , and a length L in a range of 0.5mm to 1.5mm .

IX. EVIDENCE APPENDIX

None

X. RELATED PROCEEDINGS APPENDIX

None